

REMARKS

Initially, Applicants would like to express appreciation to the Examiner for the detailed Official Action provided and for the acknowledgment of Applicants' Claim for Priority and receipt of the certified copy of the priority document.

However, Applicants note that the Examiner has not indicated that the drawings have been approved by the Official Draftsperson on a Form PTO-948. The Examiner is thus requested to indicate that Applicants' drawings are acceptable in the next Official Action.

Additionally, Applicants note that while the Examiner has indicated on the Form PTOL-326 that a copy of the Information Disclosure Statement is attached to the Official Action, such copy has not been received by Applicants. Accordingly, Applicants respectfully request that the Examiner return a copy of the initialed Form PTO-1449 with the next Official Action.

Applicants acknowledge with appreciation the Examiner's indication of allowable subject matter in claims 2-4, 8, 9, 13, 15, 16, and 18.

Upon entry of the above amendment, claims 1 and 12 will have been amended. Accordingly, claims 1-18 are currently pending. Applicants respectfully request reconsideration of the outstanding rejection and allowance of claims 1-18 in the present application. Such action is respectfully requested and is now believed to be appropriate and proper.

The Examiner has rejected claims 1, 5-7, 12, 14, and 17 under 35 U.S.C. § 102(e) as being anticipated by SANO et al. (U.S. Patent No. 5,952,714).

Although Applicants do not necessarily agree with the Examiner's rejection of the claims on this ground, nevertheless, Applicants have amended independent claims 1 and 12 to clearly obviate the above noted ground of rejection in order to expedite prosecution of the present application. In this regard, Applicants note that SANO et al. fails to show each and every element recited in amended claims 1 and 12 and each and every step recited in claim 17. In particular, claim 1, as amended, sets forth a solid state imaging device block including, inter alia, a metal plate having a backside surface and a projected surface projected from a flat surface opposite the backside surface, and "a solid-state imaging device having a front surface for receiving light and a back surface, said back surface contacting said projected surface of said metal plate". Claim 12, as amended, sets forth a structure for mounting a solid state imaging device block on an optical unit including, inter alia, a metal plate having a backside surface and a projected surface projected from a flat surface opposite the backside surface and "said solid-state imaging device having a front surface for receiving light and a back surface, said back surface contacting said projected surface of said metal plate". Claim 17 sets forth a method for mounting a solid state imaging device on an optical unit including, inter alia, providing a metal plate having a backside surface and a projected surface projected from a flat surface opposite the backside surface, and "contacting the back

surface of said solid-state imaging device to said projected surface of the metal plate”. This amendment is fully supported by the specification, including the claims and drawings, and no prohibited new matter has been added. In particular, figures 1-3; and page 8, line 17 through page 9, line 10; and page 11, line 16 through page 12, line 12 of the specification disclose the positioning of the CCD 1, the metal plate 2, and the circuit board 3 of Applicants’ claimed invention. As disclosed, the structure and method of Applicants’ claimed invention provides at least the advantage of a high degree of positioning accuracy for the device, to provide an improved solid state imaging device mounted on an optical unit.

The SANO et al. patent discloses a solid state image sensing apparatus and manufacturing method. However, the SANO et al. device includes a package 21 formed by molding the lead frame 24 into epoxy resin, and a CCD chip 27 mounted on the lead frame 24 with adhesive 30. As shown particularly in figures 1 and 2 and described in column 4, line 49 through column 5, line 22, the package 21 includes an opening 25 and a larger opening 26. The CCD chip 27 is positioned at the step between the opening 25 and the opening 26 (figure 1 and column 5, lines 12-18).

The Examiner has taken the position that figure 2 of the SANO et al. patent shows the package 21 including a projection surface above the opening 25 (Official Action, paragraph 2). However, if, as in the Examiner’s interpretation, the package 21 of SANO et al. is read on the claimed metal plate, the top or the bottom surface of the package 21 must be

considered to be the projected surface. However, as shown in figure 2 of SANO et al., the imaging device 27 touches neither the top surface nor the bottom surface of the package 21. Moreover, even if the inner lead 22 could be read as the projected surface, the claimed imaging device is not disclosed by the SANO et al. patent since the imaging device 27 of SANO et al. is configured such that only the front surface for receiving light contacts the inner lead 22.

Further, Applicants note that the CCD chip 27 of SANO et al. is positioned *below* the opening 25. Accordingly, since the projection surface is above the opening and the CCD chip 27 is below the opening 25, the CCD chip 27 of SANO et al. can not contact the projection surface. Moreover, even assuming, arguendo, that the trapezoidal cross sectional portion of the package 21 below the opening 25 (figure 2) could be read as a projection surface, the CCD chip 27 does not contact this surface. Accordingly, the SANO et al. patent does not disclose a device or method in which a back surface of a solid state imaging device contacts the projected surface of a metal plate. Further, Applicants respectfully submit that the SANO et al. patent fails to disclose a metal plate having a flat surface, a backside surface opposite the flat surface, and a projected surface that projects from the flat surface and is parallel to the flat surface. Additionally, the SANO et al. patent fails to disclose a solid state imaging device that contacts the projection surface.

Thus, the SANO et al. patent does not show a device including, inter alia, a solid state imaging device block including, inter alia, a metal plate having a backside surface and a projected surface projected from a flat surface opposite the backside surface, and “a solid-state imaging device having a front surface for receiving light and a back surface, said back surface contacting said projected surface of said metal plate” as recited in claim 1, as amended. The SANO et al. patent does not show a structure for mounting a solid state imaging device block on an optical unit including, inter alia, a metal plate having a backside surface and a projected surface projected from a flat surface opposite the backside surface and “said solid-state imaging device having a front surface for receiving light and a back surface, said back surface contacting said projected surface of said metal plate” as recited in claim 12, as amended. The SANO et al. patent does not show a method for mounting a solid state imaging device on an optical unit including, inter alia, providing a metal plate having a backside surface and a projected surface projected from a flat surface opposite the backside surface, and “contacting the back surface of said solid-state imaging device to said projected surface of the metal plate” as set forth in claim 17. Since the reference fails to show each and every element of the claimed device, the rejection of claims 1, 12, and 17 under 35 U.S.C. § 102(e) over SANO et al. is improper and withdrawal thereof is respectfully requested.

Applicants submit that dependent claims 5-7, 10, 11, and 14, which are at least patentable due to their dependency from claims 1 and 12 for the reasons noted above, recite additional features of the invention and are also separately patentable over the prior art of record based on the additionally recited features. In particular, Applicants submit that none of the cited prior art teaches or suggests a solid state imaging device block including an adhesive “wherein the viscosity of said adhesive is 1 - 30 Pa·s” as set forth in claim 10; and an adhesive “wherein said adhesive comprises a ultraviolet curing adhesive” as set forth in claim 11. Accordingly, claims 5-7, 10, 11, and 14 are each separately patentable for these additional reasons.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection, and an early indication of the allowance of claims 1-18.

SUMMARY AND CONCLUSION

In view of the foregoing, it is submitted that the present amendment is proper and that none of the references of record, considered alone or in any proper combination thereof, anticipate or render obvious Applicants’ invention as recited in claims 1-18. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

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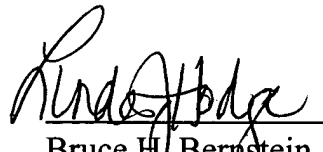
Accordingly, consideration of the present amendment, reconsideration of the outstanding Official Action, and allowance of the present amendment and all of the claims therein are respectfully requested and now believed to be appropriate.

Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so.

Applicants note that this amendment is being made to advance prosecution of the application to allowance, and should not be considered as surrendering equivalents of the territory between the claims prior to the present amendment and the amended claims.

Should there be any questions, the Examiner is invited to contact the undersigned at the below listed number.

Respectfully submitted,
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